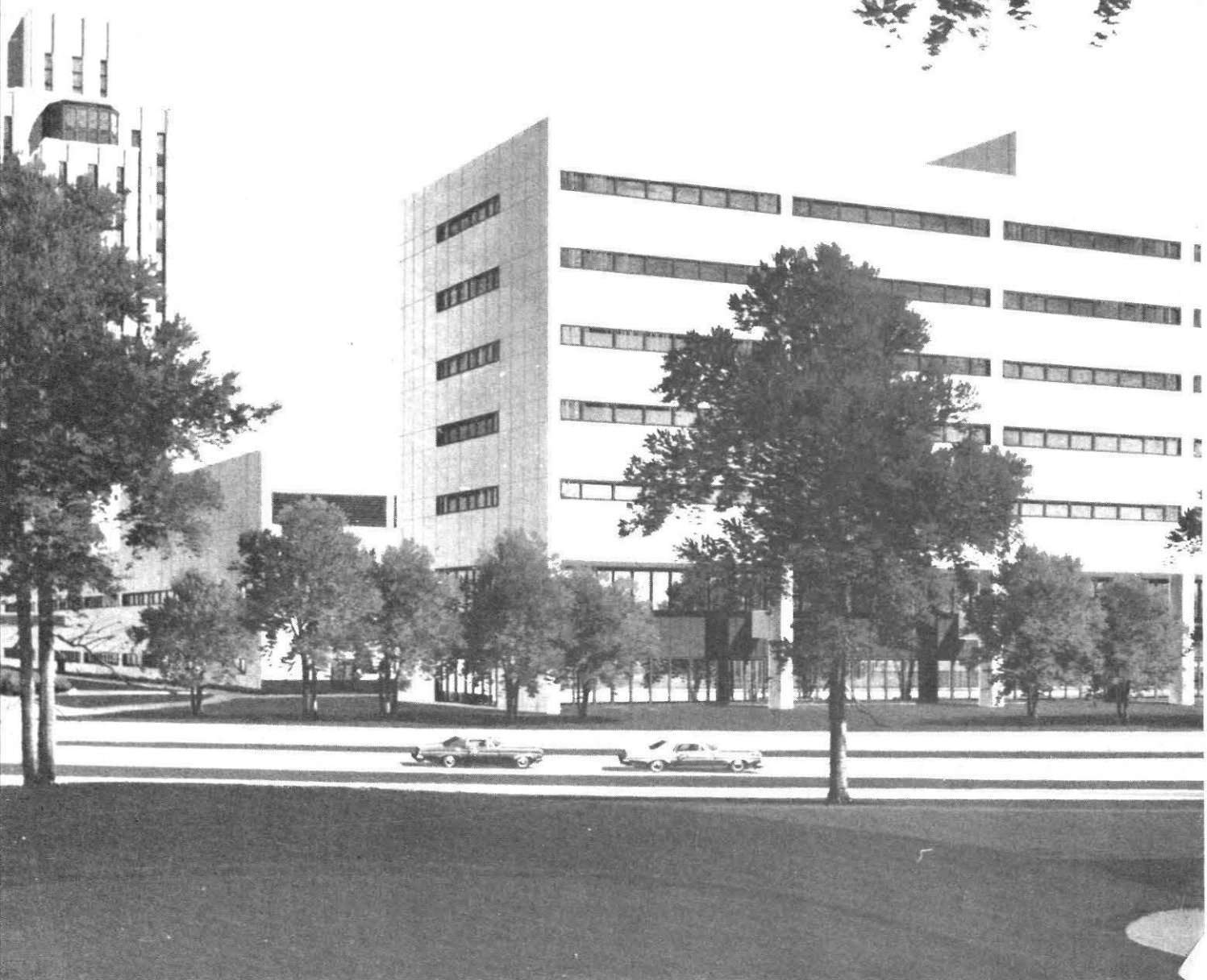


U.S. NAVY MEDICINE

June 1979



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COVER: The new wing at the National Naval Medical Center, Bethesda, Md., is a showplace of energy efficient design and has the latest in energy monitoring and control equipment.

Perspective Commanding Officers

On 21 May 1979, VADM Arentzen addressed a group of perspective commanding officers at the Naval School of Health Sciences. Although his remarks were directed to this group, many individuals felt that the Surgeon General's thoughts should be shared with other members of the Naval Medical Department.

U.S. Navy Medicine here reprints the speech in its entirety.

You are about to commence a short course of study designed specifically to help prepare you for the major task you will soon undertake. This course is designed to equip you with some of the necessary tools required when you assume command. Highly skilled leaders having both applied skills and broad perspectives are required. These next few days will not transform you into that super being just referred to. Perhaps you will never become that figure and most of the experience and background has already been accomplished by your years and growth in the health care field. These qualities, already amply demonstrated, are why you have been chosen to be here in the first place.

The perspective of command is a rare privilege and is one which must be experienced to be appreciated. It can be immensely satisfying as I can personally testify. But like most things satisfying, it requires the exercise of self-disciplined responsibility.

Your concerns must go far beyond the everyday mechanical management and direction of your respective commands. Those concerns must be related to where that com-

mand fits into the greater organization, what the purpose of that greater organization is, and where it is going. This implies attention to people, their needs, and reciprocally what the corporate need for people may be.

For some time I have realized that the reservoir of operational experience among our senior Medical Department officers—those who are prepared to direct, and perhaps to command the provision of operational support in time of combat or war—is diminishing rapidly. Similarly, we still have too few officers who are trained to assume top management roles in all our medical facilities. In these ever-changing and unpredictable times, we must be prepared for any contingency, and must maintain both the functional capability, *and the leadership capability*, to do our job. We must prepare our potential leaders to serve as both health professionals and top-level policymakers, ashore and afloat.

However, even with the development of a planned nucleus of trained professionals, I am still concerned for a most important reason—a reason that I have stressed many times in the past: The key to our survival and continued success is retention. Without it, our trained leaders, our corporate body of knowledge, will disappear from the active scene. My concern about retention is not limited to the junior officers of the Medical Department, and our enlisted personnel. I am equally concerned, perhaps more concerned, about the senior officers and senior enlisted people who leave active duty with 20 years or more service. We must retain not only our followers but our leaders.

They are our corporate body of knowledge and experience for the future. We must not only train our leaders, but use them to the fullest extent of their capabilities. We must continue our efforts to make professional growth and development a never-ending and readily available option for all those whom we count upon for leadership when the chips are down. The best way I know to prevent professional obsolescence is to avoid it in the first place.

Leaders are inspired by their followers. Those who enjoy success in command are ever conscious of the forces they employ in achieving their success. Their orders and instructions are communicated in a fashion that enables all personnel of the command to work together in the general interests of the team, rather than the special interests of individuals. The commanding officer is, by definition, the only executive whose responsibility is the whole of the command, rather than a segment of it. Yet, ironically, the commanding officer cannot fully discharge this responsibility without a great deal of help from many people, each of whom should have some idea of where they and the others are supposed to be going. Each person or group of persons must be as thoroughly familiar with what is expected of others as what is expected of them; and they should not have to guess what you think of the efforts of others, as well as their own efforts. The word must be passed—in person as often as possible—but always passed, horizontally, vertically, and deliberately.

You as commanding officers must

(Continued on p. 29)

DEPARTMENT ROUNDS

“Whirlwind Special” Nets Navy Nurses

“It’s hard to show people an aircraft carrier on the Missouri River.” This is how one Chicago-based recruiter described the problem of midwest recruiting. In an effort to correct the situation, Area Five recently invited 21 midwest nurses and nursing students to spend four days touring Norfolk Naval Base. The tour, aptly named the “Whirlwind Special,” began with a visit to the Portsmouth Naval Regional Medical Center,

where the visitors met with their active duty counterparts.

During the extensive hospital tour which followed, they were given every opportunity to compare notes and talk shop with their sea-service counterparts. The results were immediate. Said one senior nursing student from Milwaukee, “I came not really knowing what to expect from nurses in the Navy. I was surprised and pleased to meet

so many people who seemed genuinely happy and content with their work.” Said another, “I was overwhelmed by the professionalism and pride of everyone we met . . . and they were all so friendly, not at all rigid and military.”

Not content to show only the Navy’s medical side, the tour continued aboard the aircraft carrier USS *Nimitz* and the submarine tender USS *LY Spear*. “If all we



Aboard the Spear, LT Thompson explains the working of the ship's helm.

wanted to show them was a hospital, we could have taken them to Great Lakes," said LT Clark Thompson, Medical Recruiter of Recruiting District Minneapolis. "Norfolk offered a better first exposure, overall," he added.

Predictably, the midwesterners, many of whom had never even seen the ocean before, were awed by the immensity of the aircraft carrier and the complexity of the tender's many repair shops and facilities.

Aboard the *Spear*, there was an unexpected treat when the tour group met some of the first Navy women assigned to shipboard duty.

All were impressed, both with the size and complexity of what they saw, and with the obvious pride and professionalism of the WAVES they spoke with.

In an attempt to present a well-rounded view of Navy life, the Area Five escorts decided to show their charges a little about "pulling liberty" as well. With ample off-duty time programmed into the tour's itinerary, the nurses were treated to a night at a local disco, a visit to the base exchange, and a reception at the Breezy Point Officers' Club. For many, the opportunity to have their pictures taken with an admiral at the reception was one of the highlights of the trip.

The trip, according to LT Anderson, was an overwhelming success. "Some of these women came here with stereotypes and preconceived notions about the Navy and Navy medicine that we could't budge with a crowbar," he said. "The only picture they had of the Navy stemmed from their fathers' war stories." "Their main concern, when we first approach them in their junior year at school," he went on, "is for their careers. They see the Armed Forces as second class health care providers. The travel sounds enticing to them, but they are surrounded by a 'professional aura' from their first



The tour group meets one of the first Navy women assigned to shipboard duty, HM1 June Stokes (right), an ex-Army combat medic.

day in nursing school, and don't want to sacrifice that by working for something they perceive as second-rate."

One of the methods used to help overcome this misconception, is selling the continuing education programs for Navy nurses. "We explain the workings of HSETC (Health Sciences Education Training Command), and its Navy-funded practitionership education programs at civilian universities and the in-service education for relicensure at the hospitals, and they begin to see us in a different light." Under the auspices of HSETC, a nurse who showed interest and aptitude in a specific career field, would be sent for full or part-time study at a major accredited university, while performing the clinical work at the nearest government hospital. "For example, we sent the nurse anesthesiologists to study at Georgetown

University, while they do their clinical work at Bethesda," he said. Other practitionerships available through this program include: pediatrics, ob/gyn, and family nurse practitioner. "Once they see we're a professional health-care organization, the only hurdle left to overcome is the stereotype about Navy life and military service in general . . . which is where this trip came in."

According to LT Anderson, most of the women who arrived at Norfolk with stereotypes and misconceptions did a complete turnaround in their attitudes by trip's end.

If successful recruiting is measured in numbers, the tour was a blockbuster. Fifteen of the twenty-one nurses have since joined the Navy! "One thing's for certain," added LT Anderson, "we're definitely going to do this again."

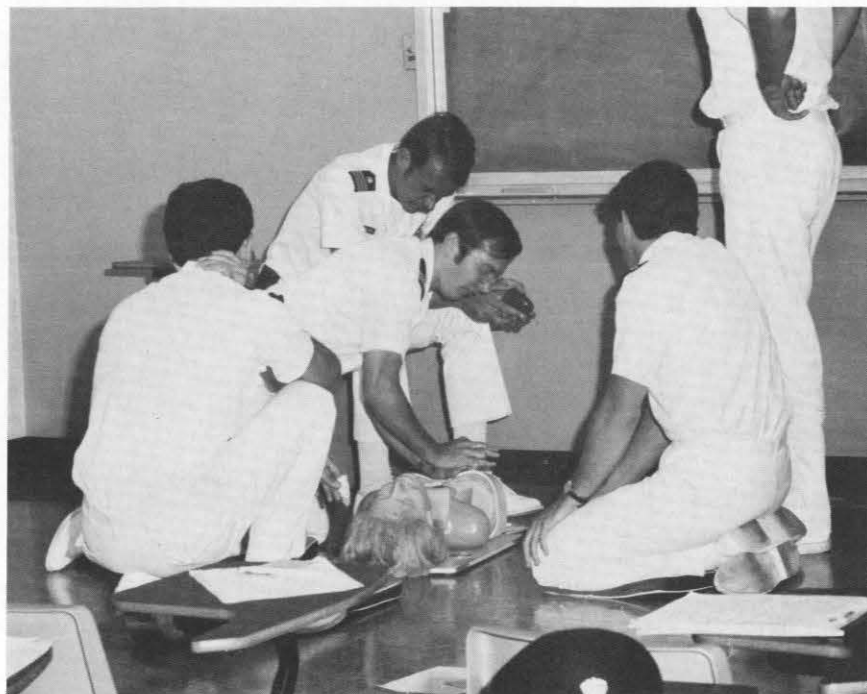
—Story and photos by PH2 W. Breyfogle

San Diego Dental Officers CPR Certified

The importance of Basic Cardiac Life Support in the management of life-threatening emergency situations, both in medical and dental treatment facilities, and "out on the streets," is well known. Because of this, a growing number of state licensure boards are demanding that doctors have valid CPR (Cardiopulmonary Resuscitation) cards from either the American Heart Association (AHA), or the American National Red Cross (ARC) when applying for licensure or relicensure. Hospitals are demanding certification for every doctor and nurse on their staffs. Many experts predict that the defensive posture in malpractice litigation arising from the management of an office emergency will be severely compromised in the future if the doctor involved is not certified in CPR. The state of California recently enacted legislation which indirectly implies that rescuers are protected under the Good Samaritan "umbrella" only if they carry a current AHA or ARC card in Basic Cardiac Life Support.

In 1977, over 640,000 Americans died from heart attacks alone, and nearly 60% of those died within two hours, before even reaching a hospital! With an increasing geriatric population—many of whom are retired military—there is the potential that a large number of medically-compromised patients will be seen in military dental clinics for routine and/or emergency dental treatment. This then places a burden upon Navy dental officers because of the risk that a life-threatening emergency might occur while these patients are under treatment in the clinics.

Recognizing these increased liabilities and changing legal trends,



CDR R. Vosskuhler, DC, USN (seated, in background), a certified CPR instructor with the American Heart Association, observes his group of dental officers as they master the technique of cardiopulmonary resuscitation.

and realizing the importance of having every dental officer fully trained in the management of office emergencies, RADM William L. Darnell, Commanding Officer of the San Diego Naval Regional Dental Center, and CAPT Erwin J. Heinkel, Jr., Director of Clinical Services for the San Diego Naval Regional Dental Center, initiated an effort which has resulted in the full certification of nearly every officer assigned to the regional center in Basic Cardiac Life Support (CPR). This is the first time a region-wide CPR effort has been sponsored in San Diego, and the effort included satellite clinics as far away as Yuma, Arizona. The San Diego County Heart Association wholeheartedly supported the concept and generously supplied all of the logistical support for the courses,

which resulted in the certification of 128 Dental Corps officers and three Medical Service Corps officers.

This week-long series of CPR classes was coordinated by CDR Roger Alexander, an instructor, instructor-trainer, and member of the CPR Committee for the San Diego County Heart Association (the only dentist on that committee). He was assisted by CAPT V. Roger Tibbetts and LTs Vince Williams and Mark Meredith of the San Diego Naval Regional Dental Center, CDR Robert Vosskuhler of the USS *Kitty Hawk*, and LT Gary Reinhart of the San Diego Naval Regional Medical Center. All are certified as CPR instructors for the San Diego County Heart Association. Also included in each class was an extra hour and a half presentation on the prevention and management of dental office

emergencies, which was correlated with the material presented in the standard CPR curriculum. Naval Regional Dental Center San Diego hopes to be able to sponsor similar classes in the near future for dental technicians, civilian dental assistants, and hygienists, with particular attention given to the training of those personnel who stand after-hours watches. The training of support personnel will result in the dental officer-rescuer having an extra pair of hands during an emergency; there have been several documented cases where CPR-trained auxiliary personnel have saved the life of the doctor!

The classes were enthusiastically received by the officers involved and many expressed the feeling that for the first time they were confident of being able to physically and mentally cope with a life-threatening emergency if such an event occurred in their offices, homes, or on the streets. As mute testimony of the course's value, within 10 days following the classes, students put their newly gained knowledge to good use. LT James Anderson saved a drowning victim at a Coronado beach and LT Marshall Batchelor was able to provide life support to a heart attack victim until further help arrived. It is anticipated that these two saved lives are only a beginning, and that more lives will be saved by Navy dental officers in the future.

It is hoped that this effort will spark similar programs in other dental regions and insure that each and every dental officer and technician is fully trained in this most essential life-preserving technique. Not only will our patients and communities benefit but our legal vulnerability will hopefully be lessened.

—CDR Roger Alexander, DC, USN, NRDC
San Diego, Calif. 92136.

BUMED SITREP

TUBERCULOSIS CONTROL PROGRAM ANALYSIS COMPLETED

A preliminary analysis of 1978 data has just been completed. Tuberculin reactors reporting to Navy and Marine Corps recruit training centers represent approximately 2.5 percent of the population. This continues the trends evident in recent years, but is a significant decrease when compared with the studies of Comstock and Edwards, who noted approximately 5.6 percent reactors among incoming recruits in 1969. Tuberculin converters, ashore and afloat, averaged approximately 1.7 percent of individuals tested. Compliance in tuberculin testing was approximately 82 percent for forces afloat (nearly 100 percent for PACFLT vessels), but only 50 percent for shore based commands. Navy Medical Department activities were particularly poor in their response to periodic tuberculin testing. This lax compliance is particularly hazardous since it is generally accepted that medical and paramedical personnel are at special risk for exposure to undetected and uncontrolled cases of pulmonary tuberculosis. There were 95 active duty personnel admitted for tuberculosis during 1978; of these, 88 patients had active pulmonary disease. The rates were highest for individuals of Asian and Malayan ancestry, and lowest for caucasians. The overall incidence for pulmonary tuberculosis among active duty Navy and Marine Corps personnel during 1978 was 13.2 per 100,000, as compared with 18.1 per 100,000 for 1977. Evaluation of data for recent years is continuing.

Surgeon General Announces New Director on 81st Anniversary of Hospital Corps

"June 17th marks the 81st Anniversary of the Hospital Corps. It is a time for celebration, reflection, and rededication. I commend all members of the Hospital Corps and their families for their dedicated efforts and much needed support.

The history of the Hospital Corps during the past 81 years has been a record of outstanding and illustrious service in all parts of the world, wherever the Navy and Marine Corps have been in peace and in war.

As you celebrate this 81st Anniversary, let us not forget that it is a time honored commemoration of a long and proud heritage of those who served before us. It is upon this tradition that the Hospital Corps must continue to build for the future. It is incumbent on all of us, especially our senior hospital corpsmen, to pass their dedication and high standards on to the leaders of tomorrow. In furtherance of this, I am very pleased to announce that Master Chief Hospital Corpsman Stephen Brown assumes the duties of Director of the Hospital Division on 17 June 1979.

Thank you for a job well done."

Information Assistance for the Armed Forces Health Professions Scholarship Program

If you are a member of the Navy Medical Department, or are enrolled in one of its subsidized medical education programs, you may be called upon by medical students to answer a variety of questions concerning membership in the Armed Forces Health Professions Scholarship Program. The following outline contains information on which to base such a response.

Basic Qualifications

To qualify for a Navy Health Professions Scholarship, students must be formally accepted for the next entering class or be currently enrolled in an AMA or AOA approved school of medicine or osteopathy in the United States or Puerto Rico. Students must be citizens of the United States, be of good moral character, and meet the physical requirements for a Navy commission.

Benefits

Health Professions Scholarships provide:

- Up to four full years tuition, including all authorized fees.
- Reimbursement for approved books and supplies that are required purchases.
- Full active duty pay and allowance at the Ensign (01) pay grade for 45 days each year while performing Active Duty for Training. If academic schedule will not permit active duty service away from school, students will remain at their school for such an assignment.
- A monthly stipend of \$400 for 10.5 months each year.
- A commission as Ensign in the United States Naval Reserve.

Benefits begin upon entrance into the program or at the beginning of the academic year, whichever is later. In the absence of legislative relief, the entire scholarship benefit package is subject to federal income tax (To date, periodic legislative relief has been provided since inception of the program).

45 Days Active Duty for Training

ACDUTRA can be spent in:

- School Clerkships (required or elective).
- Navy Clerkships (clinical or research).
- Military indoctrination courses.
- Orientation cruise at sea.

Service Obligations

- Scholarship students serve two years on active duty for the first two years of program participation or any portion thereof, and six months for each additional six months of scholarship support.
- If this is the first period of active service or participants are reentering active service after severing all previous connections with any military service, a minimum three-year active service obligation is incurred.

Graduate Medical Education

- All scholarship students are required to apply for internships in naval hospitals. Those selected will be ordered to active duty and assigned to their training hospitals with full active duty pay and allowances. Scholarship students not selected for training in a Navy facility may request a delay in active service to complete their internship in a civilian institution without pay from the Navy. Active service may also be deferred to permit completion of residency training in approved specialties.
- The time scholarship students spend while in graduate medical education programs does not count toward their active duty obligation. However, they do not incur any additional service obligation while serving as interns or residents provided they have at least two years of obligation remaining at the end of such training.
- Active Duty Assignments include:
 - Submarine Medicine

Aerospace Medicine
Ships
Regional Medical Centers
Naval Hospitals
Dispensaries and Clinics
Antarctic Research Expedition
Fleet Marine Force

Variable Incentive Pay (VIP)

Under current regulations, volunteer physicians are eligible for VIP. Officers who are repaying initial active duty obligations or are currently undergoing Graduate Medical Education are not eligible for VIP.

If you talk to students who are interested in applying for a medical scholarship in the Armed Forces Health Professions Scholarship Program, you should direct them to the nearest Naval Recruiting District Office where they may secure the appropriate application forms. The location of this activity can be found in the "white pages" of your local telephone directory.

Physical Examination Before ACDUTRA

Some confusion persists concerning the physical examination that is required before you report for each period of active duty for training (ACDUTRA). The exam is required regardless of whether ACDUTRA is to be performed at your school or at a naval facility.

Because the naval activities that perform these physical examinations usually cannot respond to last minute requests, you should arrange for your physical exam as soon as you receive ACDUTRA orders. If you have already had a complete physical examination within 12 months of the reporting date on your ACDUTRA orders, you don't have to get another one *provided Standard Form 88 and Standard Form 93* from your last physical exam are still filed in your health record. But you must still report to a naval or Naval Reserve facility so a Medical Department representative (usually a medical officer) can ascertain that there has been no significant change in your condition and that you continue to be physically qualified for active duty. Your physical fitness will be certified by any entry on Standard Form 600 as well as on your ACDUTRA orders.

Try to obtain a signed copy of SF 88 and SF 93 each time you complete a physical examination, so you can take advantage of the 12-month provision whenever it applies.

New Hospital Corps Director

On 17 June, the Navy Hospital Corps will have a new director, HMCM Stephen W. Brown. HMCM Brown comes to his new post from the Naval Regional Medical Center, Oakland, where he served as Command Master Chief.

The 27-year Navy veteran has a master's degree in public administration and is a graduate of Hospital Corps School, General Surgery and Operating Room School, and Preventive Medicine Technician School.

Master Chief Brown's appointment is an historic first that breaks with past Navy tradition. Never before has a member of the enlisted community held a corps directorship.

Brown sees his appointment as an idea whose time has come. The Hospital Corps, manned exclusively by enlisted personnel, quite logically should have a master chief as its director, he says.

HMCM Brown is not totally surprised by the precedent-making decision. There are many other recent "firsts," he points out. A supervisory course now exists for E-8's and 9's and the odds are good, he feels, that E-8's and 9's may soon be enrolled in the School of Health Care.

The new director looks forward to the challenge of his job and recognizes that it should have a very positive effect on the Hospital Corps. "It clearly shows that the opportunity is there. Now the senior or master chief out in the field has a job he too can shoot for."



NOTES & ANNOUNCEMENTS

IN MEMORIAM

ENS *Kathryn M. Bonner*, NC, USN (Ret.), a veteran of World War I and one of the early members of the Navy Nurse Corps, died 6 May 1979 at age 91. She graduated from St. Joseph's Hospital School of Nursing in Philadelphia, Pa. in 1912 and entered the U.S. Navy in 1918. ENS Bonner's duty assignments included service aboard the hospital ship *Relief* in the early 1920s, duty at Naval Hospitals Philadelphia, Pa., Quantico, Va., San Diego, Calif., Pensacola, Fla., and American Samoa. Her last duty assignment was on the commissioning crew of the present Naval Hospital Philadelphia.

ENS Bonner was medically retired in 1935.

Anthony R. Curreri, M.D., who served as the first President of the Uniformed Services University of the Health Sciences, died 3 May 1979, in Madison, Wis. at age 69.

Dr. Curreri was born in New York City. He received his Bachelor of Arts, Master of Arts, and Doctor of Medicine Degrees from the University of Wisconsin. He was appointed an instructor in surgery in 1939 and advanced to professor in 1953. Dr. Curreri served as President of the Uniformed Services University from April 1974 to Nov 1976. He was also a member of the University's Board of Regents from 1973 to 1974. The school was established by Congress in 1972 to train physicians for service in the military and the Public Health Service.

Dr. Curreri had returned to the University of Wisconsin Medical School to resume his position as the Evan P. Helfaer Distinguished Professor of Surgery. Dr. Curreri was also serving as Associate Director for Education at the William S. Middleton Memorial Veterans Administration Hospital in Madison.

REIMBURSEMENT FOR SPECIALTY BOARD EXAMINATIONS

All Medical Department officers planning to take specialty board or similar certifying examinations in FY79 are reminded to familiarize themselves with the guidelines established in BUMEDINST 1500.4G.

To be considered for Government reimbursement of costs incident to the subject examination (i.e. fees, travel, per diem), a request must be submitted to CO, HSETC via the appropriate chain of command.

To receive Government reimbursement, HSETC approval must be obtained prior to the date of the examination. Requests for HSETC approval should reach HSETC at least six weeks before the scheduled date of the examination to allow adequate time for processing. Requests which are submitted to HSETC after the date of the examination, which did not receive prior HSETC approval for reimbursement, cannot be acted upon favorably.

NRL-DEVELOPED METHOD ENHANCES FAINT PHOTO IMAGES

A scientist at the Naval Research Laboratory, Wash., D.C. has been granted a patent on a technique to enhance the contrast of faint photographic images through a process involving the photofission of low-emergy uranium isotopes.

NRL's Dr. Kenneth M. Murray, who developed the technique, reports it is designed to assist in Defense photo reconnaissance and intelligence activities. But, he says, it also could be useful in other graphic applications, including X-ray activities of medical institutions.

As an example, Dr. Murray states, if his technique was used in medical institutions, the low-level radiation that a medical patient receives during X-ray exposures might be reduced by as much as 50 percent.

The NRL researcher's method calls for toning the negative for a photograph with a harmless photofissionable isotope, irradiating it with energetic X-rays, and etching it to bring out extremely faint images impressed on the film.

The isotope he uses is uranium 238 which has a very low spontaneous fission rate, but can be made to fission on demand by irradiating it with high energy X-rays.

CHAMPUS BENEFITS FOR THE TREATMENT OF ALCOHOLISM

OCHAMPUS and DOD have received several complaints on the CHAMPUS benefits allowable for alcoholism, which essentially are no more than three weeks of treatment in-residence (including detoxification), three times in a lifetime. OCHAMPUS set up a conference to revise the benefits with current thinking and accepted practice in the field.

Benefits were designed in accordance with the treatment provided for alcoholism within the military services. The Navy's approach was essentially utilized, as

it is generally accepted as the best, and since the Army stated it desired to emulate the Navy model.

Determinations resulting from the conference are:

- Up to 28 days in-residence treatment will be allowed, with more if justification is provided.
- In-residence treatment, utilizing paraprofessional counselors will be reimbursed, as long as medical "back-up" is available. The half-way house concept, much like the Navy's Alcohol Rehabilitation Drydock system will also be eligible for reimbursement.
- Utilization psychotropic drugs for a period longer than three days (detoxification only) will be cause for audit; justification will be required.
- Aversion therapy will not be recognized as reimbursible under CHAMPUS.
- Nonutilization of Alcoholics Anonymous as an integral part of the program of therapy offered will be a cause for audit.

The OCHAMPUS conference on alcohol benefits may be an historic milestone—it will certainly be emulated by the private insurance carriers and Blue Cross/Blue Shield.

MILITARY REFERENCE BOOKS

The 1979 editions of the popular and useful military reference books published by Uniformed Services Almanac, Inc. are now available. These handy paperback volumes, filled with the latest, most current information, have been providing detailed compensation and benefits information for all military personnel and their families for many years and have a well deserved reputation for being accurate, timely, and packed with important and interesting data.

The *Uniformed Services Almanac* for active duty members, in its 21st year of publication, again presents the unique computerized "take-home" pay tables which enable personnel to determine tax and social security withholding, as well as basic pay and allowance information. All major new developments and changes regarding CHAMPUS, Veterans Benefits, special pay and bonuses, and many more subjects of interest are included. Special sections are devoted to insurance, Dependency and Indemnity Compensation and Survivors Benefits including the latest SBP changes.

The fifth annual editions of both the *National Guard Almanac* and *Reserve Forces Almanac* focus on specific information prepared for members of these components. Each of these 160-page volumes contain detailed information regarding daily, weekend and annual pay, comprehensive retirement coverage, promotions, benefits, organization, and other important subjects. Highlighted in this year's editions is complete coverage of

the new Survivor Benefit Plan for members of the Reserve components, and other changes which are of interest to all Guard and Reserve members and their families.

The *Retired Military Almanac*, now in its second year of publication, is a very comprehensive compilation of information of interest to all retirees and to those who are considering retirement. In addition to extensive coverage of retired military compensation, this attractive volume includes important information about health care in military facilities, under CHAMPUS, from the VA and USPHS. Other benefits, privileges, entitlements, and restrictions are also discussed in detail in this valuable reference book.

Most exchange stores carry these handy books and they can also be ordered directly from the publisher. Each edition sells for \$2.50 (plus 25 cents for postage and handling) or \$3.50 via first class mail. Special discounts are available for quantity purchases by units and organizations. Requests for information and orders should be sent to: Uniformed Services Almanac, P.O. Box 76, Wash., D.C. 20044.

INTERNAL MEDICINE COURSE

A postgraduate course entitled Update in Internal Medicine will be held 27-31 Aug 1979 at the Holiday Inn Golden Gateway, 1500 Van Ness Ave., San Francisco, Calif. This course consists of half-day sessions devoted to the major subspecialties of renal disease, pulmonary, cardiology, hematology, neurology, endocrinology, gastroenterology, metabolism, infectious disease, and rheumatology.

The tuition fee will be \$200, and \$175 for interns, residents, and fellows with letters of verification. The program has been approved for 32 hours of Category I credit.

For further information, contact Robert Siegel, M.D., Medical Staff Office, Mills Memorial Hospital, San Mateo, Calif. 94401. Telephone (415) 342-5667.

ATTENTION NAVY AUTHORS

Many articles by Navy personnel appear each year in a variety of professional journals and other publications. *U.S. Navy Medicine* would like to include a monthly list of some of these articles written by Navy authors from all corps. If you have published recently and would like to share your research or perceptions with your colleagues, please send us the title, name, and issue of the publication in which your article appeared.

INDEPENDENT DUTY - UPDATE

Gaining Patient Compliance

CDR Joseph J. Bellanca, MC, USN

Patient failure to carry out prescribed treatment is a familiar story to medical personnel. Patients frequently abandon therapy before full benefit has been gained be it an exercise program, course of antibiotic, low-back treatment, prescribed diet, or long-term antihypertensive medication.

It is easy to brush off this situation with the attitude, "If the patient doesn't care, it's not my responsibility." Unfortunately, this is not what "patient care" is all about. Patient care implies caring for the individual and showing respect for the person and genuine concern for his total welfare. Any problem regarding a patient's therapy deserves your immediate attention. If you can demonstrate your sincerity and concern for his health and are willing to take time to learn how to meet his changing needs, you will build the patient's confidence in you and your recommendations.

There are many ways to show genuine interest and give the feeling that your patient's needs come first.

Always treat the patient with genuine respect. He takes himself, his family, his work, and his problem seriously and he expects you to.

Listen to his opinions about his health, life, and your therapeutic goals. It not only is courtesy, but you can learn what he considers to be important and what should be emphasized in future visits. Some feature you considered irrelevant may actually mean a lot to him and other patients like him.

Take all questions seriously. Be frank in giving accurate answers in language that is understandable and shows that you are interested in satisfying him. Giving his problems your personal attention will prove that you are interested in his continued satisfaction.

If appropriate, make a followup call. Certain situations may deserve two minutes of your time to phone a

patient and find out how things are going. Several calls can be grouped into a planned 10-minute period for those situations which require special attention. Your patient will be convinced of your interest in his complete satisfaction. Basically, you are reinforcing the fact that he is worthwhile and important, and that he should treat himself the same way.

It is often assumed that the patient will do everything you recommend. If you really want full compliance with a therapeutic program, you must convince him that you offer the best solution to his problem. What many of us forget is that conviction and confidence can never be separated. We must have confidence in ourselves before we can expect the patient to place his confidence in us or in what we recommend. Self-confidence, like enthusiasm, is contagious.

One of the most useful ways to get a patient's attention and cooperation is to ask questions. Some questions are helpful and others are to be avoided since they arouse defensiveness and inhibit the patient's ability to listen to your recommendations. When you recognize this situation, you will avoid such questions as: "How are things going at home?" "Have you been taking your medication faithfully?" You should avoid certain direct questions. Asking an alcoholic how much he drinks will seldom elicit a truthful response. Such questions arouse guilt and destroy the possibility of building an open, honest relationship. Often the same information can be obtained indirectly, or should be discretely avoided until it appears that the patient can comfortably respond. Useful questions enable the patient to identify with your treatment strategy. They also encourage the patient to take an active part in planning the therapeutic program and help build confidence. "Did you know that some of my patients have lost 50 pounds in eight months on this same diet?" Good questions such as this link the therapy to the patient's needs and hopes for success. That's how good "patient care" really works.

From the Department of the Navy, Bureau of Medicine and Surgery (Code 3142), Washington, D.C. 20372.

SPRINT: A Psychiatric Contingency Response Team in Action

CDR Thomas G. Carlton, MC, USN

The survivors of disasters are known to have problems that extend long after the disaster itself.⁽¹⁾ Social, psychiatric, marital, and medical problems are all frequent in disaster victims. Anxiety, depression, inappropriate anger, nightmares, marital troubles, declining work performance, and multisystem medical complaints have been common among the survivors of recent disasters affecting sea service personnel.

Experience with survivors of the *Belknap-Kennedy* collision and the 1977 Barcelona Harbor liberty launch collision has led the psychiatrists at the Naval Regional Medical Center, Portsmouth, Va. to seek ways to prevent serious psychiatric sequelae following disasters within the Navy community. The Portsmouth psychiatrists have developed the Special Psychiatric Rapid Intervention Team (SPRINT). The SPRINT is an organized group of mental health personnel, pre-trained to provide rapid medical mental health support, afloat or ashore, immediately subsequent to a disaster with the goal of preven-

tion of long-term medical psychiatric dysfunction or disability.

In the wake of the 20 Oct 1978 collision that sank USCGC *Cuyahoga* in Chesapeake Bay, the SPRINT responded to a Coast Guard request for early preventive mental health support. A team of two psychiatrists, a clinical psychologist, two psychiatric nurses, a psychiatric social worker, a psychiatric technician, and a hospital chaplain was sent to the Coast Guard Reserve Training Center, Yorktown, Va., shortly after the request was received. At Yorktown, the *Cuyahoga's* home port, team members interviewed the 18 survivors to determine needs and to provide support for individuals and for the crew as a whole. The SPRINT also worked with friends, relatives, and co-workers of the 11 men who were lost.

The SPRINT worked closely with the Coast Guard command and medical department in a consultative role, making the benefits of their past experience and special training available to those providing the leadership and the day-to-day medical care for the personnel involved. The local command was enthusiastically supportive of the SPRINT's work. Coast Guard officers and petty officers worked closely with the SPRINT in seeking

to prevent adverse sequelae.

The work of the SPRINT followed the basic combat psychiatry principles of immediacy, proximity, and expectancy. The intervention was provided rapidly and "near the front." Group cohesion and early return to duty were strongly encouraged.

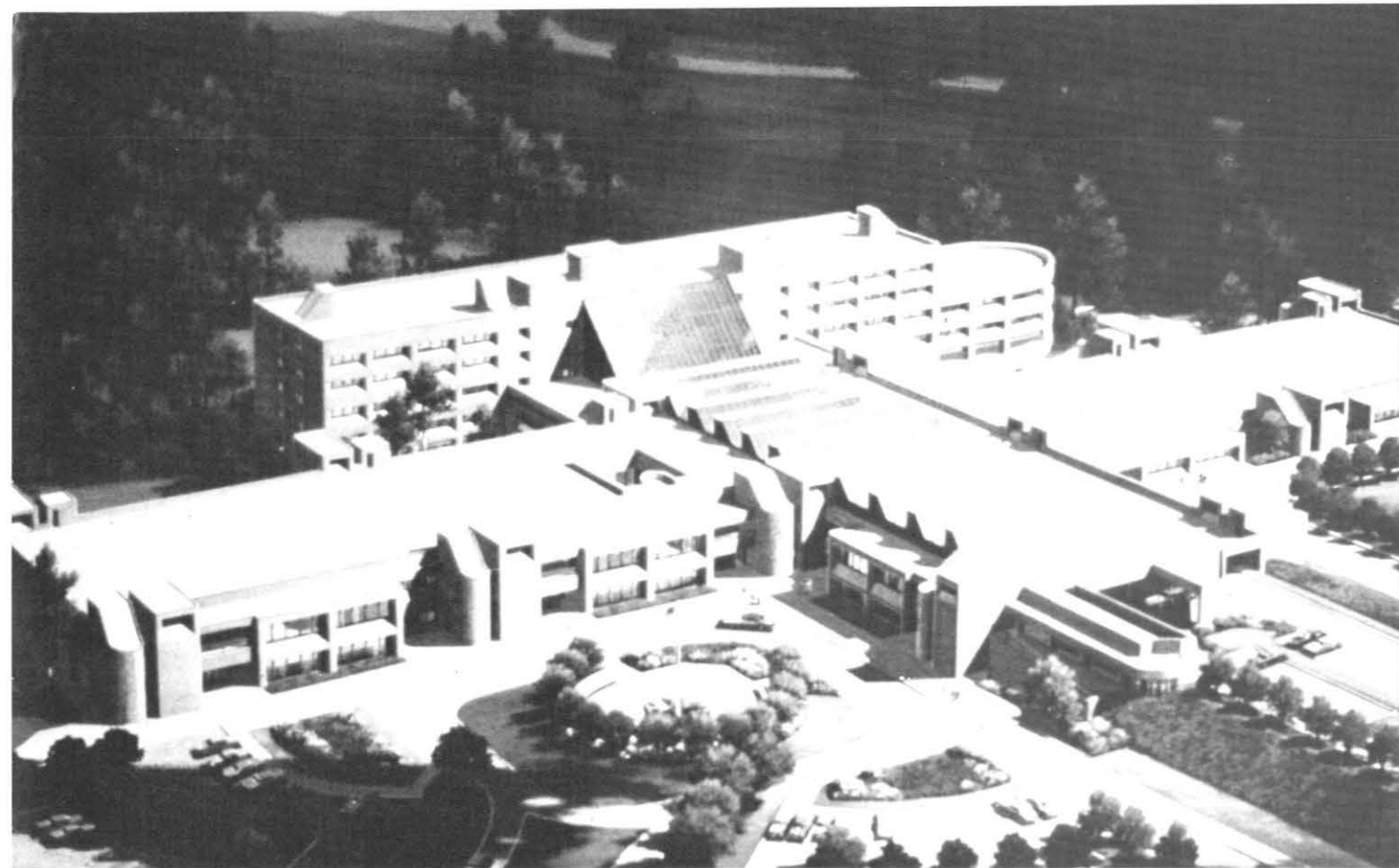
Preliminary clinical observations suggest that the intervention was successful. The survivors appear to be in much better physical and emotional health than would be expected based on available literature on disaster victims. Of course, this impression will require verification by long-term followup.

The *Cuyahoga* intervention also provided valuable additional experience for the SPRINT and demonstrated its capability for rapid contingency response. The importance of this capability, widely recognized in time of war, has often been forgotten in time of peace. The SPRINT concept, like that of the surgical team, answers one of the special needs of Navy medicine and provides extraordinary opportunities for Navy medical personnel.

Reference

1. Edwards JG: Psychiatric aspects of civilian disasters. *Br Med J* 1(6015):944-947, 1976.

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Solar panels are an integral part of NRMC Camp Lejeune.

Navy Energy Conservation: Status Report

Crude oil prices, OPEC, gasoline lines, nuclear power, alternative energy sources—all have become inescapable topics of daily conversation. With the exception of inflation, perhaps no other issue arouses more emotion than the energy crisis. Oil heats our homes, feeds our industries, powers our transportation, insures our food supply, and is essential for national defense.

It is an inescapable fact of life that solving the energy problem is the key to our future. The development of alternative sources is one solution. The other is conservation.

Navy Energy

How does the defense establishment in general and the Navy in particular fit into the energy picture?

The Department of Defense uses about 2 percent of the nation's total energy resources. The Air Force is the single largest user. The Navy ranks second, taking about 32 percent of the Defense energy pie. Of that, 72 percent is petroleum-based fuel.

During the oil embargo year of 1973, the Navy began implementing several conservation programs. By FY77 Navy energy use had decreased by 27 percent. However, 60 percent of this reduction was brought about by reducing ship and aircraft strength and by curtailing steaming and flight time.

Navy planners soon realized that further reductions would seriously affect the fleet's readiness. Moreover, only limited further energy savings would be realized if these methods were continued in the future.

Another problem was inherent in the Navy's shore-based facilities. Buildings are not ships. Unused vessels can be moored and planes grounded. Functioning offices and hospitals cannot. Therefore, no dramatic shoreside savings were forthcoming.

The answer to future energy savings clearly had to be obtained through improvements in energy efficiency and the reduction of energy waste, particularly in shore-based facilities.

The July 1977 Executive Order 12003 increased the

tempo of the Navy's energy program by plainly stating the goal. By 1985 new buildings would have to be 45 percent more energy efficient than those constructed in 1975.

This goal was not a pipe dream. Computer studies showed that energy conscious design alone could achieve a 38 percent reduction in energy at no additional increase in building cost. Everything from simple insulation to computerized control and monitoring systems would guarantee the remaining 7 percent.

Weatherstripping and Computer Technology

To make new buildings and existing structures more energy efficient, Navy planners have many tools to work with. Design standards are readily available for lighting, insulation, windows, siding, efficient mechanical systems, and buildings.

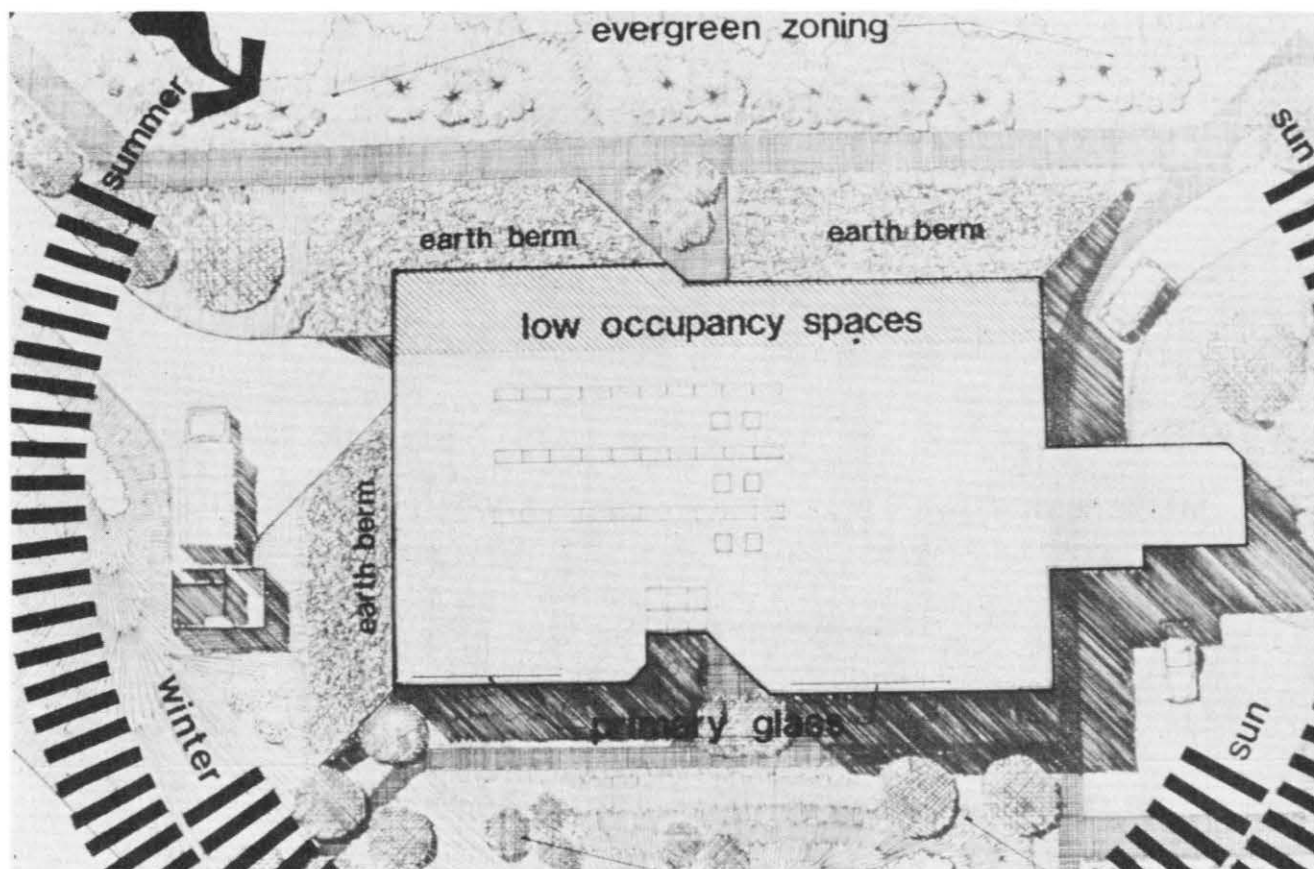
In many cases, aesthetics have had to take second place to common sense approaches. Gone are the days of south-facing picture windows and glass walls. Where possible, new structures are oriented on an east-west axis to minimize solar heat gain. Such orientation can

reduce air conditioning requirements by 6 percent.

Smaller double glazed and coated windows are the rule in much new construction as is the liberal use of insulation.

Lighting normally expends about one-fifth of a facility's total energy and up to one-third of its electricity. In all new construction and in many retrofits of existing facilities, high efficiency lighting fixtures are being installed as original equipment.

Heat recovery in mechanical systems is now a primary concern. Where before waste heat was vented to the outside, it now can be recovered for additional use. Cogeneration is one technique being employed. In such a system, a gas, diesel, or steam turbine generator provides electricity to the facility. Since the power is produced on the premises, transmission loss is minimal, resulting in high efficiency. Waste exhaust heat from the turbine heats boiler water or powers an absorption chiller for air conditioning. Typical single phase electricity plants generate at about 33 percent efficiency. In many cogeneration systems, that efficiency can double.

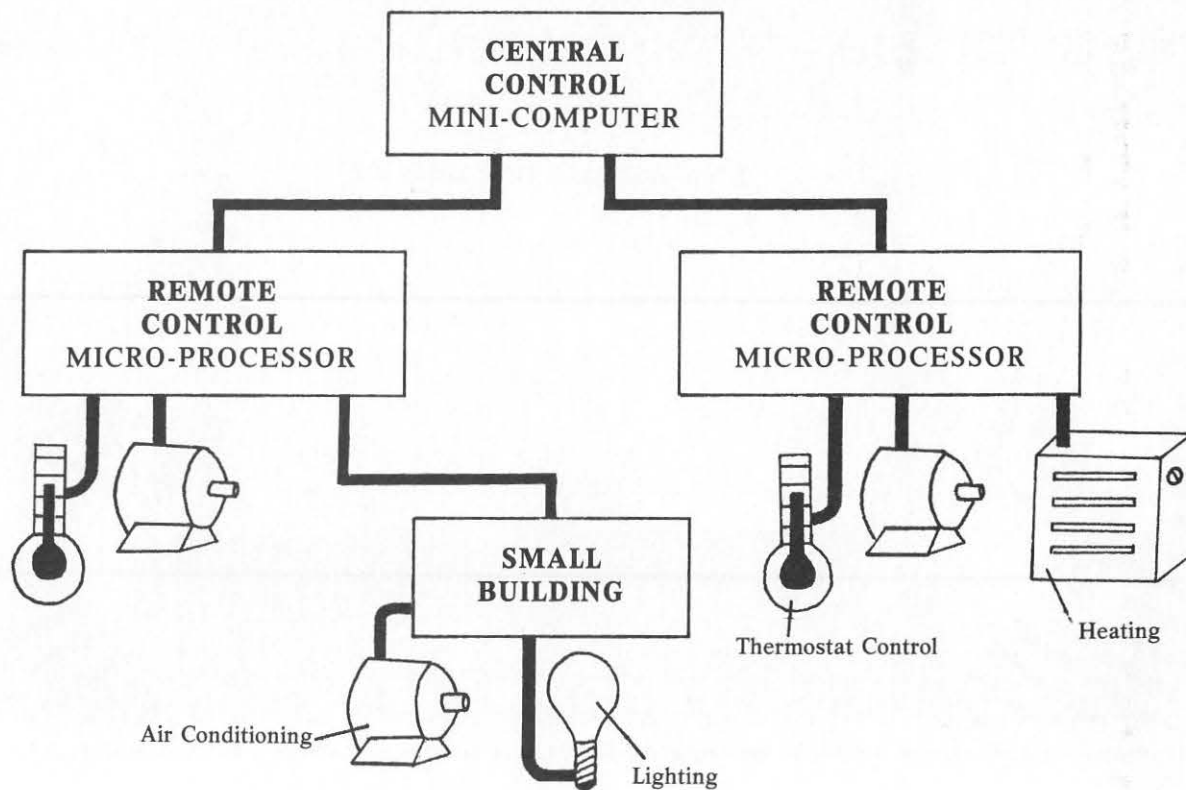


Building orientation and seasonal sun angles are important factors in the design of Quantico's medical/dental facility.



Energy monitoring and control terminal

EMCS Concept



Computers have provided the answers for energy efficient building design. Now they are being used more frequently to function as the building's central energy brain. Although manual control may seem dependable, the human factor often undermines energy efficiency. Lights are left on, thermostats wrongly set, and air conditioners left running. Even with properly adjusted thermostats, a great deal of energy can be wasted. Unforeseen variables such as solar heat gain and humidity can prevent smooth, efficient operation.

The energy monitoring and control system (EMCS) is the modern and sophisticated solution to energy management. Using thermosensors and microprocessors on local control or as part of the larger base system, the day's heating or cooling requirements can be preprogrammed for maximum efficiency. Timing sequences for on-off motor operation and lighting are easily programmed as are adjustments for ventilation systems.

Besides its energy function, an EMCS can be programmed to monitor a facility's smoke and fire detection, security, and communications systems. Its versatility is as limitless as the computer's capacity to store information.

Solar Power

The Sun, that ultimate energy source, is clean, unlimited, and, unfortunately, years away from being used as a major energy source. The chief problem is its present cost effectiveness. Components and installation are still quite expensive and thus far the only practical applications have been in domestic hot water systems. Nevertheless, the Military Construction Authorization bill for FY79 calls for the installation of solar systems in all DOD housing and in one-quarter of all military construction projects.

More and more Navy facilities are having solar systems installed, but as auxiliary systems. In few cases will solar power play a major role in achieving the 1985 goal outlined in the Executive Order.

Funding

ECIP. How does the Navy fund its energy conservation programs? The introduction of the Energy Conservation Investment Program (ECIP) in 1975 carefully spelled out what funds would be provided for updating existing structures and what the money could be used for.

ECIP funds are congressionally authorized and are funneled through the Chief of Naval Operations, the Naval Facilities Engineering Command (NAVFAC), and Military Construction, Navy. To qualify for ECIP funds, a facility must justify the project on the basis of

four criteria. The project must:

- be a retrofit of an existing facility;
- cost more than \$100,000;
- be justified on the basis of how much energy is saved per \$1,000 invested;
- pay for itself within its lifetime (A new boiler costs \$50,000 and has a life expectancy of 25 years. The savings accrued over that period must add up to the initial investment.); and
- have supporting documentation (NAVFAC Form 11000/4, DD Form 1391, and an economic analysis.

Several types of projects qualify for ECIP funds—storm windows, insulation, boiler modifications and tuneups, solar hot water, energy efficient electrical fixtures, heating, ventilation, and air conditioning systems, and energy monitoring and control systems. All eligible projects must utilize state-of-the-art technology.

EEP. The Energy Engineering Program (EEP) is funded by Operational and Maintenance, Navy and is designed to identify and develop engineering techniques that will help achieve the goals of Executive Order 12003 and the Navy's energy strategy. EEP provides for:

- feasibility studies to identify high technology, fast payback, retrofit projects for existing facilities;
- the prioritizing and funding of those projects;
- the development and implementation of a program of improved operator/maintenance personnel training; and
- the development and improvement of energy resource management tools for use at the activity level.

EEP is composed of 11 elements. They are:

- (1) Industrial Energy Conservation
- (2) Cogeneration
- (3) Energy Monitoring and Control Systems
- (4) Industrial/Boiler Water Treatment
- (5) Air Conditioning Tuneup
- (6) Training
- (7) Energy Management Indices
- (8) Energy Distribution System Improvements
- (9) Energy Technology Applications Program
- (10) Heating and Power Plant Optimization
- (11) Alternative Energy Sources

Elements 2, 3, 5, 8, 9, and 10 involve areas in which medical activities can directly participate.

EEP's **Air Conditioning Tuneup** element is designed to improve the operation and maintenance of air conditioning systems with a capacity greater than 50 tons.

(Continued)

Camp Pendleton—A Retrofit Success Story

One of the most dramatic success stories thus far in the Navy's energy conservation campaign is NRMC Camp Pendleton. Since 1975 the five-year-old, nine-story, 600-bed hospital and medical facility has realized a 75 percent reduction in fuel oil consumption and a 37 percent overall reduction in energy use.

The success is due in part to a comprehensive program based on frequent maintenance, fine tuning of equipment, and the installation of automatic controls and power-saving electrical fixtures.

Pendleton's computerized maintenance system insures that all energy-consuming equipment receives the manufacturer's recommended preventive maintenance such as periodic lubrication and replacement of worn drive belts and filters. Other parts are replaced before they begin to adversely affect the equipment's operating efficiency.

Fine tuning of boiler controls, air conditioning systems, and chillers, have virtually eliminated jerky and abrupt equipment response, thus reducing fuel consumption and power demand.

Air conditioning cooling towers have been modified, allowing maximum evaporation to take place before cooling fans cut in.

Where possible, clock timers similar to those available for home use control simple operations such as on-off switching for motors.

In other areas such as hospital corridors, knife switches on lights have dramatically reduced power usage. During working hours, minimum lighting levels are maintained. After hours, additional lights can be turned on for cleaning and afterward turned off. In areas where incandescent

lighting is not essential, 35-watt fluorescent fixtures are being used.

The activity's future energy program is very ambitious; the goal is to make the facility even more energy efficient. The plan for FY80 calls for a cogeneration plant, one of the first procured for Navy use. Diesel turbine generators will provide most of the facility's power. Waste heat from the generators will be used to power steam absorption air conditioning systems and boilers for domestic hot water and other steam requirements.

Twenty-one air conditioning systems are being modified for economizer cycle operation. Such a system fully utilizes already cooled internal air rather than expending additional energy to cool a large volume of outside air.

Also planned is the application of solar film on the inside of existing windows. Such use will greatly reduce the absorption of radiant energy and could save as much as \$89,000 a year.

Simple and inexpensive methods are also part of Pendleton's energy strategy. Where possible, thermostats are set at energy efficient levels and the temperature of domestic hot water has been lowered.

Staff participation is a key factor in the program. Nurses and housekeeping services keep venetian blinds lowered and turned outward in all unoccupied rooms, drastically reducing solar heat gain. Other members of the activity, ever conscious of the campaign to conserve, do what they can to turn off unused lights and appliances. All are aware that continuing success in conservation is a matter of personal pride.

The FY80 plan, only a part of which has been described, is expected to cut the present energy consumption by another 80 percent. Whether that figure is achieved or not, one fact remains. NRMC Camp Pendleton has already demonstrated what a comprehensive retrofit program can do to achieve spectacular energy savings.

NRMC Camp Pendleton recently won the American Hospital Association's Energy Conservation Award for achieving a one-year 20 percent energy reduction.



NNMC's "Smart" Energy Monitoring and Control System

Energy conservation was a primary consideration in the construction and equipping of both the new hospital wing and the new building housing the Uniformed Services University of the Health Sciences at the National Naval Medical Center.

The hospital wing was aligned to give it an east-west axis, thereby minimizing solar heat gain. In patient rooms, the plan called for integral venetian blinds sandwiched between small solar bronze double-glazed windows. Tinted skylights in the other areas let in light while filtering out unwanted solar rays. In the lobby and in other areas where large windows are required, the architects planned overhangs to shade the high sun of summer. All entrances have double-doored vestibules and the building is completely insulated.

Energy conscious design is only the foundation of NNMC's conservation effort. The real energy saver is the sophisticated computer based brain. CBAS, the Central Building Automation System, utilizes analog and digital sensors to control and monitor the wing's heating, ventilation, air conditioning, hot and chilled water, steam, electrical

power and lighting, and emergency power generation. The specific energy-related functions the computer will perform are:

- Sequenced on-off motor control
- Ventilation damper adjustment
- Recording and forecasting of trend load buildup that allows manual control of peak loads
- Electrical energy totalizing
- Exterior lighting control
- Energy metering
- Heat reclamation
- Monitoring of total energy usage

The CBAS computer can and will do more than monitor and control energy. Because energy management requires only a small percentage of the computer's total capacity, it can also accommodate other systems as well—medical gases, fire alarm and smoke management, security, and a sophisticated zone paging system.

Even with the addition of these other chores, the central computer, in conjunction with add-on terminals and microprocessors, has the potential to take on many more jobs in the future.

NAVFAC's Engineering Field Divisions are currently identifying and surveying all activities having systems of this capacity. If your activity has an air conditioning system over 50 tons and you have not been contacted by an Engineering Field Division representative, you should contact NAVFAC for a survey.

The **Energy Distribution System Improvement** element is designed to evaluate an activity's heating and electrical distribution system and gauge its potential for improvement. NAVFAC Engineering Field Divisions are conducting surveys for this element. All activities should see that their systems are evaluated for energy efficiency.

The **Heating and Power Plant Optimization** element is aimed at improving efficiencies of large (over 50 MBTU's per hr.) central steam and electric plants by:

- upgrading equipment;
- identifying staffing, maintenance, and training deficiencies;
- improving operational procedures; and
- developing ECIP/ETAP projects.

NAVFAC Engineering Field Divisions are also coordinating surveys relating to this program element.

Medical or other activities without staff civil engineers or public works officers should contact the local public works liaison officer to see how these program elements apply to their commands. Special inquiry should be made to determine whether the Engineering Field Division conducted the necessary engineering surveys.

ETAP. The Energy Technology Application Program (ETAP) is another program funded by congressional appropriation. It is administered under the EEP program by NAVFAC. Similar to ECIP, ETAP funds apply solely to retrofits. Projects must:

- range between \$5,000 and \$100,000 including design cost;
- save at least 20 MBTU's annually per \$1,000 invested;
- be life cycle cost effective; and
- have supporting documentation (Special Project step 2 submission and economic analysis).

Projects qualifying for ETAP funds are exactly the same as for ECIP but must cost less than \$100,000.

As with ECIP, all eligible projects must utilize state-of-the-art technology.



Solar panel array at the Naval Weapons Center dispensary and dental clinic, China Lake, Calif., is part of a system designed to provide 90 percent of the facility's domestic hot water, 61 percent of the space heating, and 63 percent of the space cooling requirements.

The BUMED Energy Effort

Although the Navy has realized a 27 percent reduction in Energy consumption since 1973, energy consumption at BUMED activities has increased by 6.5 percent. Since 1977 there has been a greater effort to retrofit existing facilities and take advantage of energy efficient design and equipment in the construction of new buildings.

Using ECIP and ETAP funds, BUMED is currently retrofitting over a dozen facilities with everything from storm windows and insulation to energy monitoring and control systems. NRMC Camp Pendleton will shortly install a diesel turbine power cogeneration air conditioning system, and update and tune several of its boilers.

Installation of solar panels for domestic hot water for the Cecil Field dispensary and dental clinic is now operational.

The Future

What does the future hold for Navy energy conservation? The nation's demand for energy increases daily as does our dependency on foreign oil. The armed forces too are becoming more vulnerable to shortfalls and skyrocketing costs. Little chance exists that a major energy breakthrough is about to occur. Nuclear energy is under attack and major applications of solar technology yet seem far off. The ability of the Navy and her sister services to continue to fulfill their obligations depends to a large degree on their own efforts to reduce consumption of petroleum.

The Navy, not alone as a "late starter," is now hard at work to make up for lost time. Besides conservation funding programs, other initiatives are underway. Since 1966, a course on energy management has been held annually, sponsored by the Naval School, Civil Engineer Corps Officers, Port Hueneme. This year the week-long event, held in Washington, attracted 120 participants, about double last year's attendance. Navy and civilian energy specialists lectured on state-of-the-art developments and instructed the participants in practical energy problem-solving.

To promote competitive interest among Navy activities, the Secretary of the Navy now sponsors a Navy-wide Energy Conservation Award. With Large Shore and Small Shore Activities as two of the categories, the competition centers around five functional areas.

- Awareness of and compliance with existing directive issuances in the field of energy resource management.

- Planning in the areas of energy conservation and

Pending BUMED Retrofit Projects

| | |
|----------------------|---|
| Camp Pendleton | • Building Alterations |
| Norfolk | • Heat Recovery System |
| Quantico | • Insulation and Storm Windows • Thermostat Control Values • Boiler Replacement |
| Philadelphia | • Installation of Day/Night Thermostats • Storm Windows |
| Bethesda | • Building Insulation |
| Corpus Christi | • Energy Monitoring and Control System |
| Great Lakes | • Building Alterations |
| Millington (Memphis) | • Refrigeration Unit for Surgical Suite |
| San Diego | • Heat Recovery System for Laundry Building |
| NAS Jacksonville | • Installation of Vestibules and Air Curtains • Modification of Air Conditioning Units in Bldg. 1010 • Cooling Tower Chemical Treatment |

use of less depleting, more available energy sources.

- Efficient use and maintenance of all energy consuming, producing, and distributing equipment.

- Innovative proposals for the improvement of existing equipment, or the design and development of a new process or unit to solve specific problems of energy production, utilization, distribution.

- Training of personnel in specific duties and responsibilities related to energy conservation as well as awareness of the command's specific problems in energy conservation.

The winner of this year's Large Shore Activity award is NAS Patuxent River. The Small Shore Activity award went to BUMED's NRMC Corpus Christi.

Very little has been accomplished compared to what remains to be done. Clearly, more courses are required to acquaint Navy energy managers both with new technology and retrofit techniques applicable to their own

facilities. More needs to be done to acquaint them with ECIP, ETAP, and other programs. Thus far few medical/dental facilities have applied for funds through these programs.

Camp Pendleton and NRMC Corpus Christi provide excellent examples that medical facilities can be energy efficient. Activities that aggressively pursue the funding of energy conservation projects will quickly see the savings reflected in their monthly energy bills. This in turn will free funds for purchasing much needed medical supplies and equipment.

Awareness and dedication are the keys to the long-term success of the Navy's energy conservation effort. The technology is available. The big job of applying it remains to be done. —JKH

For further information or to contact your NAVFAC Engineering Field Division about a survey:

Northern Division
Philadelphia, PA
(215) 755-3995
Autovon 443-3995

Chesapeake Division
Washington, DC
(202) 443-3765
Autovon 288-3765

Atlantic Division
Norfolk, VA
(804) 444-7331
Autovon 690-7331

Southern Division
Charleston, SC
(803) 743-3870
Autovon 794-3870

Western Division
San Bruno, CA
(415) 877-7506
Autovon 859-7506

Pacific Division
Pearl Harbor, HI
(808) 471-3214
Autovon Call Local Operator

Energy Glossary

ACT-UP

Air Conditioning Tuneup Program (part of EEP).

Cogeneration

Method of improving energy consuming machinery efficiencies by using waste heat from a primary source to power a secondary machine, i.e. waste heat from power generating equipment to power steam absorption air conditioning equipment and heat domestic hot water.

ECIP

Energy Conservation Investment Program. Energy saving projects funded by Military Construction, Navy and exceeding \$100,000.

EFD

Engineering Field Divisions of the Naval Facilities Engineering Command. There are six regional divisions.

EMCS

Energy monitoring and control system. Uses automated equipment, usually computers, to monitor and control energy consuming systems.

ETAP

Energy Technology Applications Program. Energy saving projects funded by Operations and

Maintenance, Navy, and costing less than \$100,000.

HVAC

Heating, ventilation, and air conditioning system.

Low Energy Structures

Buildings that have been designed with orientation and architectural and structural features that minimize energy consumption.

MBTU

Millions of British Thermal Units. Standard energy unit used by the Navy.

MILCON

Military Construction, Navy. Supplies funds for new construction.

NAVFAC

Naval Facilities Engineering Command.

O&MN

Operations and Maintenance, Navy. Funds daily operations.

Retrofit

Installation of new energy saving equipment and/or the upgrading of an existing structure.

Fine Tuning and Basic Repair Net Institution 20% Energy Cut

Institutional administrators, bombarded by reports touting that energy consumption can be substantially reduced simply by fine tuning their facility, can take heart. These reports *can* be true.

Mamaroneck High School (Mamaroneck, N.Y.) serves as a classic case history.

The 322,000 square foot facility, consisting of a relatively new wing connecting two 50-year-old buildings, has a poor energy record. During a normal winter (4,848 degree days is normal for the area), it used approximately 320,000 gallons of oil and 1.6 million kwh of electricity.

The institution consumed an average of 194,700 BTU's per square foot, which is high for that type of facility.

An energy/reduction, conservation and management program (E/RCM) at the school was launched nearly three years ago and is now netting a 20% reduction in energy consumption, with predictions of obtaining as much as a 50% cutback viewed as reasonable.

The E/RCM program was divided into three major phases.

- Survey the buildings for energy problems;
- Bring the facility's existing systems into the best possible working order;
- Institute improvements in the institution's mechanical and electrical systems.

The E/RCM program saved \$47,000 in the first year alone. If current predictions are correct, the district will be repaid for its investment in four to six years, and then banks its savings in the years after that.

"Our investment in this project was

approximately \$200,000," said Paul McDevitt, assistant superintendent for the district's business affairs. "I consider that a moderate investment compared to the energy savings we've been able to achieve."

Mamaroneck High School's E/RCM program boasts common sense fine tuning as opposed to sophisticated "new technology." The following chronicles the school's actions.

- Ancient, defective thermostats and temperature control valves were replaced or rebuilt throughout the buildings. Where radiators had no controls (about 30% of them), new thermostats were installed.

- Buried boiler condensate return lines had completely corroded. As a result, boilers were constantly calling for make-up water. Cost of added water, extra fuel to heat and chemicals to treat it was estimated to be more than \$100,000 over a 10-year period.

Full extent of this problem was not discovered until water meters were installed on water feeds to each boiler.

New condensate lines were installed to solve the problem.

- Six inches of fiberglass insulation was laid in the school's attics. This work was accomplished by district personnel and summer student help, cutting labor costs considerably.

- The gymnasium had contained 64 incandescent lighting fixtures, each with a 500 watt bulb. These were replaced by eight 1,000 watt high pressure sodium vapor fixtures. The change improved lighting and cut by one-quarter the system's energy consumption.

Dollar savings for the lighting conversion at today's rates are estimated at over \$3,000 annually. Additional savings will come in labor and bulb replacement costs, since the lights will last 15 to 20 times longer than the ones they replaced.

- All incandescent fixtures were replaced with fluorescent units, saving energy and labor costs.

In corridors, phantom tubes were used to cut energy use approximately in half, but with the ability to provide even and pleasant light.

- Continuously running showers were a major source of energy waste. Metering type faucets were specified to control water flow. At the same time, water temperatures were reduced from 140° to 105° F saving fuels and creating a safer environment.

- Three, 50-year-old boilers were tested and found to be sound. However, a highly efficient air atomizing burner was installed in one of the boilers.

Now, this 80% efficient boiler-burner unit is being used as a "workhorse" heating unit, carrying the entire load of the buildings, doing the same job that the three units had been accomplishing in the past.

The two other units are only used for standby, eliminating the need to invest money in revamping them.

McDevitt emphasized that the school's energy savings have been accomplished without "touching the very structure of the building." But he doesn't rule out that possibility.

"We're going to take a hard look at other options that could involve major structural renovation. But we'll have to be careful," he added. "We could wind up spending a lot of money and not getting much back in return."

AMS Technical Group, Inc. (Mamaroneck) served as consulting engineers for the E/RCM project.

—Reprinted from *Institutional Management*, March 1979. North American Publishing Co.

Mamaroneck High School: the figures tell the story

| | 1974-75 | 1977-78 | Reduction |
|-------------------|-----------------|------------------|-----------|
| Fuel Oil | 316,500 gal. | 249,000 gal. | 21% |
| Electricity | 1.6 million kwh | 1.32 million kwh | 18% |
| BTU's/square foot | 194,700 | 154,700 | 20% |

Pulmonary Function Testing in the Navy Asbestos Medical Monitoring Program

LCDR Sally K. Cowles, MC, USN

Pulmonary function testing is one of the key examination items in the asbestos medical monitoring program. When properly performed with well calibrated instruments, pulmonary function testing can detect lung changes before chest X-ray evidence appears and before clinical symptoms become apparent.

There is no single pulmonary function abnormality, chest X-ray finding, or physical examination finding uniquely specific for asbestos-related disease. However, certain findings, taken together with a history of exposure to asbestos should arouse a high level of suspicion that asbestos-related disease exists. Pulmonary function results are nonspecific; findings similar to those seen in asbestos-related disease are also seen in persons with many other lung problems, including heavy smoking.

Of the wide variety of pulmonary function tests available, only a few are of current usefulness for an asbestos medical monitoring program. To be a useful screening test, a test must be simple to perform and administer, readily reproducible, have known general population standards, and it must be shown to be able to discriminate reliably between those who have a high likelihood of disease and those who do not. To detect early changes of restrictive lung disease seen with the fibrotic changes of asbestosis, forced expiration spirometry results come closest to meeting these screening criteria. Other tests may be more sensitive, but they

are also less reproducible, more cumbersome to administer, or lack reliable general population standards.

Spirometry Tests

The test values obtained from a forced expiration maneuver on a reliable spirometer include the following two tests required by the asbestos medical monitoring program.

FVC (Forced Vital Capacity). The FVC is the maximal volume of air which can be exhaled *forcefully* after a maximal inspiration. It is perhaps the most sensitive indicator of early asbestos-related disease. The lung fibrosis seen in asbestosis results in an increased "stiffness" of the lung and decrease in lung volume. Other causes of a reduced FVC include lung fibrosis of non-asbestos etiology (Silicosis, berylliosis, rheumatoid lung), replacement of lung tissue by tumor or inflammatory exudate (such as in TB, pneumonia), chest wall deformities, and severe bronchopulmonary disease (advanced obstructive lung disease).

FEV₁ (Forced Expiratory Volume in One Second). The FEV₁ is the volume of air which can be forcibly expelled during the first second of expiration. The FEV₁ is abnormal in obstructive lung disease and provides a method to help distinguish restrictive lung disease (such as that seen in asbestos-related disease) from obstructive lung disease (seen more frequently in smoking-related diseases such as emphysema and chronic bronchitis).

By calculating the FEV₁ as a percent of FVC, further definition of the type of impairment can be obtained. Normally, one should be able to expire 70-80% of the FVC in one second, depending on age and sex. In an

From NRMCMC Bremerton, Wash. 98314.

individual with pulmonary fibrosis (such as in asbestosis), the FVC may be significantly reduced, and in turn, because of the decreased volume, the FEV₁ will also be reduced when compared to expected normal values; but, in the absence of obstructive disease, one should expire 80% of this reduced vital capacity in one second (i.e. $FEV_1 \div FVC \times 100\% = 80\%$ or greater). If on the other hand, obstructive lung disease is present (i.e. emphysema, chronic bronchitis), both the FEV₁ as percent of predicted normal value, and the FEV₁ as percent of FVC will be abnormally low.

Techniques of Spirometry

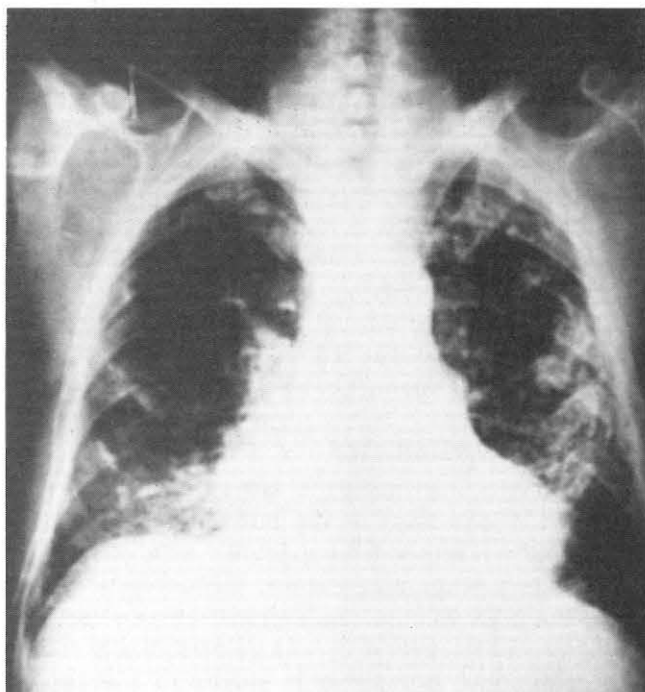
Technical Manual 77-1 *Pulmonary Function Testing in Occupational Medicine*, developed by Dr. Horvath for pulmonary function technician training and available from Navy Environmental Health Center, Cincinnati, Ohio, is an excellent reference for proper pulmonary function techniques; much of this paper has been developed from it.

The single most important factor in successful spirometry is the skill and training of the technician. Technician training for the asbestos medical monitoring program will be made available by the Navy Environmental Health Center. During the actual performance of spirometry, meticulous attention to detail is essen-

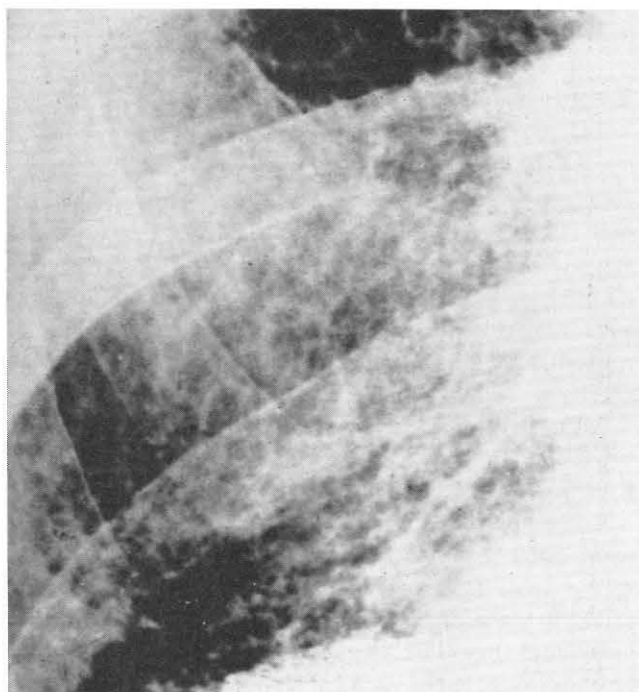
tial. The procedure should be explained to the worker in simple terms. At least one hour should have elapsed since the subject's last smoke. Pulmonary function studies should not be performed within two hours after the main meal. They should be postponed if the worker is acutely ill from any cause or has experienced an upper or lower respiratory tract infection within the previous three weeks. Tight clothing should be loosened, dentures removed. The worker should sit or stand in front of the spirometer with the chin slightly elevated and the neck slightly extended. Under normal circumstances there is little difference in spirometry values whether the subject is sitting or standing. An exception is in the grossly obese subject where the sitting value may be significantly lower. The use of a nose clip is recommended.

The worker should then be instructed to take the deepest possible breath, to close his mouth firmly around the mouthpiece and to blow immediately into the machine as hard, as fast, and as completely as possible. The most common errors at this point include failing to keep a tight seal around the mouthpiece, pursing the lips as if blowing a trumpet, or obstructing the mouthpiece with the tongue.

After two practice blows, three further tracings should be obtained and checked for acceptability. At-



Chest film demonstrates advanced asbestosis with pleural thickening and calcification. Interstitial disease particularly prominent in the lower lung zones and "shaggy" heart.



Prominent interstitial disease with linear, irregular opacities.

tempts made without full inspiration prior to expiration, without maximal effort, or which are marred by coughing should be repeated. The variation between the largest and the smallest forced vital capacity (FVC) of the three satisfactory tracings should not exceed 10%. From the three satisfactory tracings, the FVC and FEV₁ should be measured. The largest FVC and FEV₁ should be used *regardless of the satisfactory curve(s) on which they occur*. For example, in the calculation of $FEV_1 \div FVC \times 100\%$, the FEV₁ and FVC need not be from the same curve.

Correction to BTPS (body temperature, ambient pressure, saturated with water vapor) is an important step in the calculation of spirometric tests. Correction is necessary because the patient exhales the gas at body temperature (37°C) while the volume recorded by the spirometer is at the somewhat lower ambient temperature. This volume of gas recorded by the spirometer must then be multiplied by a factor to convert it to what it should be at normal body temperature. This usually increases the gas volume recorded by the spirometer by approximately 8%, but it may vary from 4-10% depending upon ambient temperature. This correction is particularly important in areas where ambient temperature varies considerably. Some manufacturers (including Jones, makers of Jones Pulmonor II) build in an automatic correction factor. This is acceptable, but if ambient temperature in the room in which spirometry is performed varies more than a few degrees, correction to BTPS may still be necessary.

Evaluation of Results

The decision whether baseline spirometry results are "normal" is usually made by comparison with a set of published predicted normal values. Those of Morris and co-workers published in 1971 in the *American Review of Respiratory Disease*, were derived from a population of healthy, nonsmoking men and women with relatively little exposure to air pollution. They are regarded by many as the preferred set of predicted normals.

Abnormal functions are present when the:

- FEV₁ or FVC is less than 80% of predicted; or
- $FEV_1 \div FVC \times 100\%$ is less than 70%.

It must be pointed out that the FVC and FEV₁ of noncaucasians is approximately 15% lower than in whites of the same age and height. In noncaucasians (black, orientals), the *predicted* FEV₁ and FVC for any given individual should be multiplied by 0.85 to adjust for this 15% difference. No such correction is necessary for the $FEV_1 \div FVC \times 100\%$. Before labeling any baseline study as abnormal, it should be repeated in two weeks.

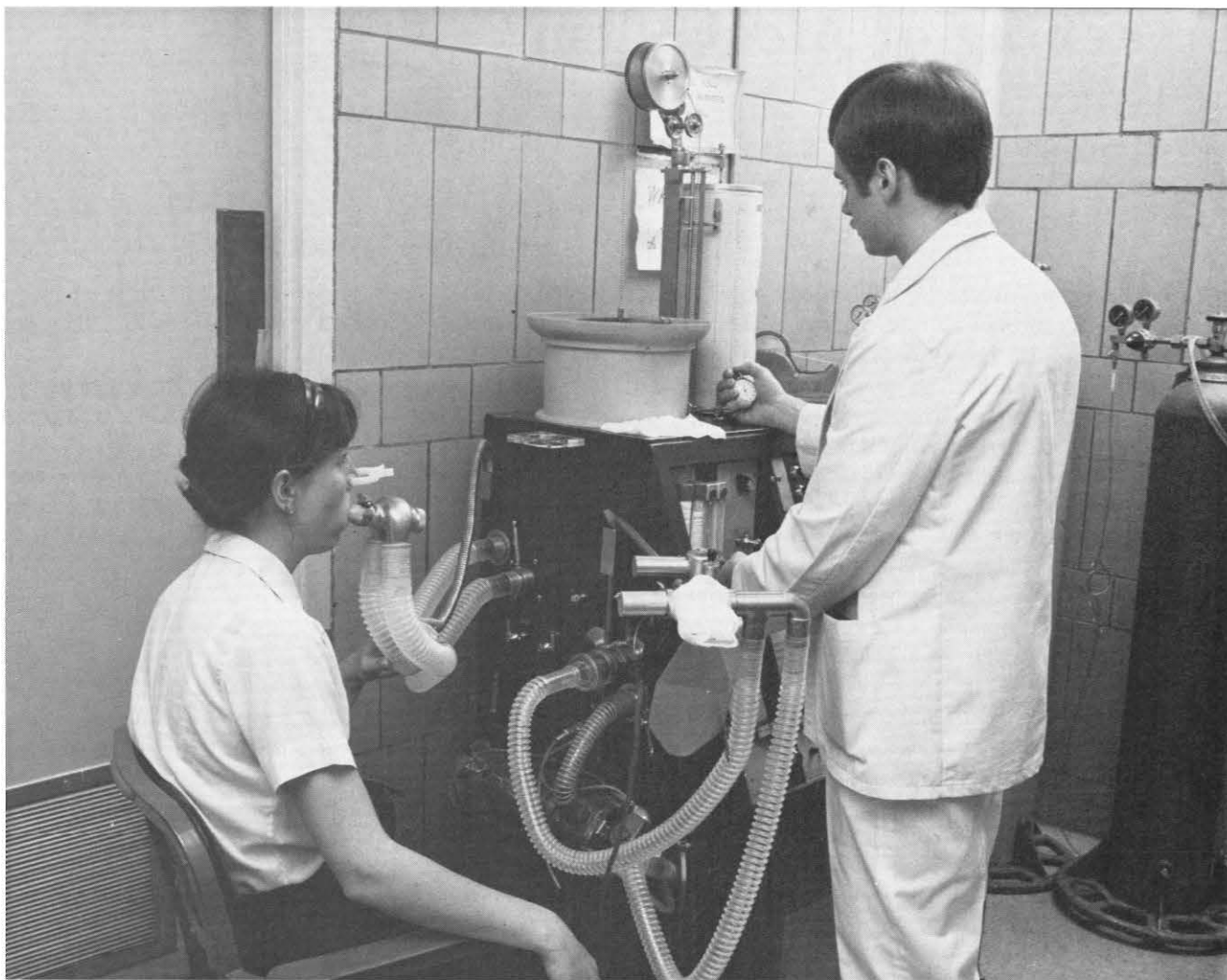
After a baseline has been established, subsequent

pulmonary function tests on an individual worker should be compared with his previous best values, *not* a set of predicted normals. The worker serves as his own control and followup values can be compared to changes in pulmonary function which might normally be expected with aging. In males, a 30 milliliter annual decline in FEV₁ and 25 milliliters in FVC can be attributed to normal aging. In females, a 25 milliliter decline in both FEV₁ and FVC is expected per year. In addition, the change in any given subject tested over a period of time may be 2-6% for the FEV₁ and the FVC. This variation includes both biological and instrumentation factors. Comparing followup values obtained on different spirometers can be an additional source of error. Measurements of pulmonary function are highest in the afternoon and decline slightly during the evening hours. Values are also higher in the summer than in the winter. Annual followups should ideally be scheduled during the same shift and month. The effects on airways of cigarette smoking may be particularly pronounced up to an hour after smoking.

Considering all the above sources of variation, follow-up studies should be compared to the previous highest value for each test, and if the changes seen are not clearly attributable to the effects of nondisease related variables, they should be considered abnormal when (1) there is a decline of more than 8% in the FEV₁ or the FVC; (2) when the decrease in the $FEV_1 \div FVC \times 100\%$ is greater than 6%; or (3) the $FEV_1 \div FVC \times 100\%$ is less than 70% at *any* time. Any abnormalities should be verified by repeating spirometry in two weeks. If abnormalities persist, clinical assessment by a physician qualified to evaluate chest disease is essential. Spirometric findings of severe respiratory impairment, defined by the proposed asbestos instruction OPNAVINST 6260.1A as an FEV₁ \div FVC \times 100% less than 45% or an FVC of less than 50% of predicted is considered disqualifying for asbestos exposure. A worker with deteriorating pulmonary function tests should be fully evaluated prior to reaching such a degree of impairment, however.

Choice of Spirometer

No single instrument is currently being recommended by the Navy as the instrument of choice for pulmonary function testing in the asbestos medical surveillance program. However, it is essential that the machine be a volume displacement spirometer which reliably retains calibration, can be periodically checked for calibration, is reasonably simple to operate, and which is well maintained. Reliable instruments which may be successfully used include the Stead-Wells and Collins water-seal spirometers, bellows spirometers



Examinee exhales forcefully into spirometer mouthpiece for measurement of lung volume (FVC) and the capacity of airways to accommodate rapid exhalation (FEV₁).

such as the Vitalograph or Jones Pulmonor, or a dry rolling seal spirometer such as one of Ohio Medical or Collins. Most Navy shipyards currently use the Jones Pulmonor bellows type spirometer or the Ohio Medical dry rolling seal type.

Whatever the machine, it should be regularly checked for calibration. Calibration should be performed at least weekly with a calibration syringe of at least 2 liters volume. Flow rates can also be checked by hooking up a peak flow meter in series between the syringe and spirometer. If possible, quarterly calibration against a Stead-Wells or Collins water-seal spirometer is also recommended. Because of the degree of day-to-day biologic variation in spirometry values, biologic calibration is only useful as a rough check on general machine functioning, and is not a reliable guide

to precise calibration. However, it is a simple and quick way to confirm a major dysfunction if one is suspected.

Each spirometer needs regular preventive maintenance. Care and cleaning methods will vary from machine to machine, but if results are to be accurate (especially when results are compared from year to year), daily cleaning and maintenance must be performed religiously. Most spirometers are durable and long-lived instruments, but they are also precision machines which must be treated with the care and attention necessary to keep them in good operating order and accurate calibration.

The validity and reliability of spirometry results in the end depend entirely on the ability of the spirometry technician and the maintenance and calibration of the spirometer.

Screening of Alcoholism

LT Raymond N. Sampson, MSC, USN

One of the common screening instruments used in the Navy to identify alcohol abusers is the Twenty Questions test. It requires the respondent to answer either "yes" or "no" to each of 20 questions thought to be predictive of alcoholism. The Twenty Questions test is not copyrighted; consequently it is reproduced here. Table I lists those questions. Currently the instrument has no known published norms and is subjectively used as a clinical judgment tool. The physician, psychologist, or alcohol rehabilitation professional arbitrarily decides which items are most predictive of alcoholism and how many "yes" responses are required before the respondent is assigned to an alcohol rehabilitation program.

Over the last three years the author has interviewed professionals working in various Navy alcohol treatment facilities in Maine, California, and Hawaii. They were asked how they use the Twenty Questions score when deciding whether a patient should be referred to a Navy alcohol treatment program. Some of the following replies dramatically illustrate how varied are the criteria for assignment to a Navy alcohol treatment facility.

"The alcoholic's denial system is so great that you cannot trust him to be honest when responding to the questions. The number of questions he (the alcoholic) checks 'yes' will probably be about the same as the nonalcoholic."

"If he (the alcoholic) was honest, he'd probably check all of the questions 'yes.'"

"Anybody who say he's had a complete loss of memory as a result of drinking (item 17) is an alcoholic."

"The longer a guy has been in the Navy, the more alcohol indicators you'll find and the greater the likelihood he'll need alcohol treatment."

The present study sought to answer the following questions:

- Is the Twenty Questions test useful in distinguish-

ing problem drinkers who need to be assigned to an alcohol treatment program from others in the Navy not in need of alcohol treatment?

- What questions, if any, do a good job of predicting whether a patient is in need of an alcohol treatment program?

- Is the person with many years of active duty service time more likely to be in need of alcohol treatment than one with less service time?

Method

Five hundred sixteen subjects, who took the Twenty Questions test in 1978 and were subsequently interviewed and admitted to the Alcohol Rehabilitation Drydock (ARD) in Pearl Harbor, Hawaii, were randomly selected and served as the experimental group. The average age of the experimental group was 25.77 years. Standard deviation was 9.51 years. Thirteen were females and 503 were males. Only three of the subjects were officers.

Four hundred subjects who received the Twenty Questions test in 1978 and who were not subsequently admitted to any alcohol rehabilitation program were randomly selected from the Pearl Harbor Mental Health Clinic files and served as the control group. The average age of the control group was 22.56 years. The standard deviation was 4.90 years. Forty-nine were females; 351 were males. Fifteen subjects in the control group were officers.

Results

In order to determine whether the Twenty Questions test distinguished problem drinkers requiring an alcohol treatment program from others, the study required the means and standard deviations of the scores (number of questions checked "yes") for the control and experimental groups. The average number of questions marked "yes" for the control group was 1.49. Standard deviation was 2.10. The average number of questions marked "yes" for the experimental group was 8.05.

LT Sampson is assigned to the Mental Health Clinic NRMHC, Pearl Harbor, Hawaii.

TABLE 1

| | Yes | No | | Yes | No |
|---|--------------------------|--------------------------|---|--------------------------|--------------------------|
| 1. Do you lose time from work due to drinking? | <input type="checkbox"/> | <input type="checkbox"/> | 11. Do you have a drink the next morning? | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Is drinking making your home life unhappy? | <input type="checkbox"/> | <input type="checkbox"/> | 12. Does drinking cause you to have difficulty in sleeping? | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Do you drink because you are shy with others? | <input type="checkbox"/> | <input type="checkbox"/> | 13. Has your efficiency decreased since drinking? | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Is drinking affecting your reputation? | <input type="checkbox"/> | <input type="checkbox"/> | 14. Is drinking jeopardizing your job or business? | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Have you ever felt guilty after drinking? | <input type="checkbox"/> | <input type="checkbox"/> | 15. Do you drink to escape from worries or troubles? | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Have you gotten into financial difficulties as a result of drinking? | <input type="checkbox"/> | <input type="checkbox"/> | 16. Do you drink alone? | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Does your drinking make you careless of your family's welfare? | <input type="checkbox"/> | <input type="checkbox"/> | 17. Have you ever had a complete loss of memory as a result of drinking? | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Do you turn to lower companions and an inferior environment when drinking? | <input type="checkbox"/> | <input type="checkbox"/> | 18. Has your physician ever treated you for drinking? | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Has your ambition decreased since drinking? | <input type="checkbox"/> | <input type="checkbox"/> | 19. Do you drink to build up your self-confidence? | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Do you crave a drink at a definite time daily? | <input type="checkbox"/> | <input type="checkbox"/> | 20. Have you ever been to a hospital or institution on account of drinking? | <input type="checkbox"/> | <input type="checkbox"/> |

Standard deviation was 5.57. The *t* test comparing control group and experimental group scores was statistically significant ($t=22.62$; $p \leq .005$) and strongly suggested that the Twenty Questions test does a good job of discriminating between those in need of an alcohol treatment program, such as an ARD, and those not requiring treatment.

Table 2 lists the proportion of subjects in the control and experimental groups who responded to each item.

In order to determine which questions best predicted alcoholism, a point-biserial correlation was obtained on each question responded to by the experimental group. Table 3 lists the correlation, *t* value, and significance level for each item. Every question of the Twenty Questions test was statistically significant beyond the .001 level of significance, strongly suggesting that each question does an excellent job of predicting alcoholism.

A Pearson product moment correlation (*r*) was applied to the data in order to determine whether number of years in military service was positively correlated to the number of questions answered "yes" on the Twenty Questions test. The correlation was not statistically significant ($r=.07$). A subject with many years of active duty service was no more likely to need alcohol treatment than a subject having less active duty service time.

Discussion

Anyone who has ever confronted an alcoholic about his drinking is well aware of the alcoholic's defensiveness. Yet when an individual needing an alcohol rehabilitation program is screened for alcohol problems with the Twenty Questions test, he willingly responds "yes"

TABLE 2

| Question | Proportion of Control Group Answering "yes" to Question | Proportion of Experimental Group Answering "yes" to Question |
|----------|--|---|
| 1 | .02 | .39 |
| 2 | .02 | .43 |
| 3 | .08 | .27 |
| 4 | .03 | .58 |
| 5 | .20 | .56 |
| 6 | .06 | .43 |
| 7 | .03 | .34 |
| 8 | .07 | .31 |
| 9 | .04 | .44 |
| 10 | .03 | .31 |
| 11 | .03 | .35 |
| 12 | .03 | .24 |
| 13 | .02 | .46 |
| 14 | .01 | .48 |
| 15 | .26 | .58 |
| 16 | .27 | .58 |
| 17 | .19 | .57 |
| 18 | 0 | .16 |
| 19 | .09 | .34 |
| 20 | 0 | .22 |

TABLE 3

| Question | r _{pb} | t | Significance Level |
|----------|-----------------|-------|-----------------------|
| 1 | .63 | 18.30 | * |
| 2 | .60 | 17.00 | * |
| 3 | .56 | 15.29 | * |
| 4 | .59 | 16.50 | * |
| 5 | .60 | 17.00 | * |
| 6 | .63 | 18.30 | * |
| 7 | .66 | 19.95 | * |
| 8 | .70 | 22.35 | * |
| 9 | .65 | 19.39 | * |
| 10 | .54 | 14.57 | * |
| 11 | .60 | 17.00 | * |
| 12 | .62 | 18.01 | * |
| 13 | .67 | 20.53 | * |
| 14 | .62 | 18.01 | * |
| 15 | .58 | 16.23 | * |
| 16 | .53 | 14.13 | * |
| 17 | .53 | 14.13 | * |
| 18 | .50 | 13.02 | * |
| 19 | .61 | 17.51 | * |
| 20 | .46 | 11.71 | * |

*p < .001

to an average of eight of the questions. Ninety-nine point nine percent of those not in need of an alcohol rehabilitation program respond "yes" to fewer than eight questions. The average number of "yes" responses for the control group was only 1.49.

The subjects with alcohol problems in this experiment took the Twenty Questions test before they had ever been accepted into a rehabilitation program. Future research might investigate the Twenty Questions test score of alcoholics before and after treatment to determine whether there is a significant change in their scores on that self-report instrument.

All questions seem to do a good job of predicting alcohol problems serious enough to warrant treatment. That is not overly surprising. For example, none of the control group reported ever being hospitalized or placed in an institution because of drinking. Only one percent of the control group reported that drinking was jeopardizing their jobs. What is surprising is that one percent of the control group reported that drinking was

jeopardizing their jobs and yet received no treatment through some alcohol rehabilitation service.

If we followed some learning model of alcoholism and assumed that an individual slowly becomes alcoholic as a result of years of drinking, then we would assume a positive correlation between alcoholism and length of service. This was not supported in the present study. A person with many years of service was no more likely to have a serious alcohol problem than was a person with very little service time. This supports the disease concept of alcoholism which suggests that the alcoholic is alcoholic when he takes that first drink. It also supports the similar notion that alcoholism is not due to any cumulative effect.

The small number of officers and women included in this experiment suggests that these groups, for some reason, tend not to be referred for alcohol treatment even when treatment is indicated. Could it be that similar to good co-alcoholics, some of us protect officers and women?

provide the primary motivating forces which leads to the desired action and unity of effort of your people. Your personal leadership, fused with your level of authority, must encourage, inspire, teach, stimulate, and motivate all the people with whom you work. Do this and you will get the job done. Better yet, you will get it done *well*, and enthusiastically, as a team.

Behavioral scientists tell us that there is one quick way to lose members of a team, however, and that is to fail to use them to the fullest extent. The now familiar sports expression, "play me or trade me," may have meaning for managers of organizations as well as baseball teams. Our problem is, of course, that we have so few "trades" we can afford to make for our experienced people these days; like the Redskins, our "draft choices" are practically exhausted. We do have some members of our team, however, whom we have the opportunity to "play" more effectively. In this instance, I am referring to our senior and master chief petty officers.

Recently I met with a group of E-8's and E-9's attending the four-week Health Resources Management Course here at the Naval School of Health Sciences. These knowledgeable and experienced leaders are ready, willing, and able—with training—to take on greater responsibilities. I would ask you to consider, carefully as you go to your commands, just what you can do to improve the retention and utilization of our valuable resource of health care providers. One sure way to keep them "coming back for more" is to give them more responsibility, and the commensurate authority, to do a more challenging job. Work, too, on their professional development, particularly those

who have had an opportunity to complete formal management training at this school. This is a source of talent available to you. Use it!

Think, for example, of some of your more important functions such as contact point management and training, functions where experience and cool headedness are indispensable. For the most part, our senior staffs are mature persons who have developed that necessary compassion and know-how to create and maintain in the minds of our patients, that most desirable perception—a favorable impression of the Navy health care system. You will note that I said contact point management *and* training. I have been told our contact point function is improving and that is most encouraging. But we need to do more. We need to identify every patient contact point and monitor each and every one of them every day, and in some instances, even more often. We need to make sure that every person, military and civilian, before being assigned to any clinical or support service, knows precisely what is expected of him in his effort to provide service, and to satisfy every reasonable need of every patient. Perhaps, most importantly, we need leadership in this effort—and we need it on the firing line, where the patients are. I would suggest that it would be very beneficial to have the cool and experienced hand of one of our senior enlisted persons readily available to manage—and avoid—those seemingly innocuous incidents we've all experienced at contact points, incidents which, if mismanaged, soon lead to administrative crises and to bad press. I'm sure no one here would complain about not having enough work to do. Why not give your experienced enlisted people more opportunities to help you?

Speaking of increased responsibility and authority for master and

senior chiefs, I hope that each of you will fully utilize the know-how of these proven leaders in supporting the sailors and marines in our forces afloat and ashore. In most instances, our chief hospital corpsmen and dental technicians have been there—in the ships, and with the marines. This is a reservoir of knowledge that must be fully utilized—and utilized for the good of all.

Gentlemen, leave here with a renewed awareness of how much the accomplishment of our mission depends upon how well we train, utilize, lead, and retain our people. Having been trained, become trainers yourselves, and help your shipmates benefit from your experiences. Put your human assets on the balance sheet and take stock of them from time to time. Work hard to keep the talent we have and to keep yourself professionally sharp.

These days of fiscal constraints and cost containment will test your mettle for efficient dollar and materiel management. These may be areas wherein the physicians among you may not have been required to concentrate as much attention. Now is the time to change that and place these elements in their overall perspective.

Soon the whole picture will be yours to consider, manage, be responsible for, and possibly and most importantly, to be accountable for.

Do not feel overwhelmed. A calm awareness is a more fitting mood. Remember, gentlemen, you are better off than Columbus. He didn't know where he was going. He didn't know where he was when he got there, and when he returned, he didn't know where he had been. You will have all the figurative sea charts to tell you where you are and where you are going. Self audit and accountability will tell you where you have been.

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